PB-230 735

POLLUTION OF THE INTERSTATE WATERS OF THE POTOMAC RIVER (WASHINGTON METROPOLITAN AREA) DISTRICT OF COLUMBIA-MARYLAND-VIRGINIA. PROCEEDINGS OF CONFERENCE, SESSION (RECONVENED) (3RD) HELD AT WASHINGTON, D. C. ON OCTOBER 13, 1970

Federal Water Quality Administration
Washington, D. C.

1970

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PB 230 735

THIRD SESSION

(RECONVENED)

of

CONFERENCE IN THE MATTER OF

POLLUTION OF THE INTERSTATE

WATERS OF THE POTOMAC RIVER

AND ITS TRIBUTARIES -

WASHINGTON METROPOLITAN AREA,

STATES OF MARYLAND AND

VIRGINIA, AND THE DISTRICT

OF COLUMBIA

I N D E X

Statement By:	Page
Murray Stein	15
Paul Freese	20
John S. Bethel, Jr.	37, 55
Alfred Machis	53
Conclusions of the Conference	64

Third Session (Reconvened) of the Conference in the Matter of Pollution of the Interstate Waters of the Potomac River and its Tributaries - Washington Metropolitan Area, States of Maryland and Virginia, and the District of Columbia, held at the South American Room, Statler Hilton Hotel, 16th and K Streets, Northwest, Washington, D. C., on October 13, 1970, at 9:40 a.m. (Reconvened, also May 21-22, 1970.)

PRESIDING:

Murray Stein, Assistant Commissioner for Enforcement and Standards Compliance, Federal Water Quality Administration, Department of the Interior, Washington, D. C.

ALSO ATTENDING

Honorable William Rogers, Deputy Under Secretary, Department of the Interior

CONFEREES

F. R. Blaisdell, Acting Regional Director, Middle Atlantic Region, Federal Water Quality Administration, Charlottesville, Virginia

Carl J. Johnson, Executive Director, Interstate Commission on the Potomac River Basin, Washington, D. C.

A. H. Paessler, Executive Secretary, Virginia State Water Control Board, Richmond, Virginia

Thomas D. McKewen, Director, Environmental Health Services, Maryland State Department of Health, Baltimore, Maryland

Malcolm Hope, Associate Director, Office of Environmental Health, D. C. Department of Public Health, Washington, D. C.

CONFEREES (continued):

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CTSL, Annapolis, Maryland

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P R O C E E D I N G S

OPENING STATEMENT

BY MURRAY STEIN,

ASSISTANT COMMISSIONER FOR ENFORCEMENT

AND STANDARDS COMPLIANCE, FEDERAL WATER

QUALITY ADMINISTRATION

MR. STEIN: The conference is open.

This is a special session on pollution of the interstate waters of the Potomac River and its tributaries - Washington Metropolitan Area, in the States of Maryland and Virginia, and the District of Columbia.

This session was considered so important by the conferees that all of us waived the customary statutory notice, and we are calling this conference in accordance with the agreement of all of the conferees unanimously.

Both the State and Federal governments have responsibilities in dealing with water pollution control problems. The Federal Water Pollution Control Act declares that the States have primary rights and responsibilities for taking action to abate and control pollution. Consistent with this, we are charged by law to encourage the States in these activities.

At the same time, the Secretary of the Interior

is charged by law with specific responsibilities in the field of water pollution control in connection with pollution of interstate and navigable waters. The Federal Water Pollution Control Act provides that pollution of interstate or navigable waters which endangers the health or welfare of any persons shall be subject to abatement. This applies whether the matter causing or contributing to the pollution is discharged directly into such waters or reaches such waters after discharge into a tributary.

The purpose of the conference is to review a memorandum of understanding between Fairfax County, Virginia; the Washington Suburban Sanitary Commission, Maryland; and the District of Columbia Department of Sanitary Engineering. The memorandum details the actions that each of these parties will take to abate pollution of the Potomac River.

Although this is a public meeting, a discussion of the memorandum of understanding is the only item of business scheduled.

For purposes of the conference, after the official parties have had an opportunity to present the memorandum of understanding and make comments on it, and this will include the conferees, the conferees will be available for questions. We will have an opportunity for anyone in the audience who wishes to ask the conferees or

the parties to the agreement questions about it.

We would ask that anyone asking a question come up to the rostrum. We will have a microphone available. Identify yourself for purposes of the record and be sure that Mr. McLaughlin who is making the transcript can hear you. We will endeavor to answer the question.

Then the conferees will recess into an executive session. If the conferees come to conclusions and recommendations, we will then reappear here and make an announcement. At that time, such of the conferees as wish, but certainly the Federal representatives, will be available for questions from the press. But at that point I would like to emphasize that, while we make this opportunity available, all the conferees, of course, are independent operators and can take any action they wish.

At this point I would like the conferees to introduce themselves. May we start at my far left? Mr. Paessler.

MR. PAESSLER: Al Paessler, Virginia State Water Control Board.

MR. JOHNSON: Carl Johnson, the Interstate Commission on the Potomac River.

MR. ROGERS: W. L. Rogers, Deputy Under Secretary, Department of the Interior.

Murray Stein

MR. STEIN: On my far right.

MR. McKEWEN: Tom McKewen, State of Maryland.

MR. HOPE: I'm Malcolm Hope, D. C.

MR. FREESE: Paul Freese, Department of Sanitary Engineering, D. C.

MR. BLAISDELL: Frank Blaisdell, Acting Regional Director, Middle Atlantic Region, Federal Water Quality Administration.

MR. STEIN: My name is Murray Stein, from the Federal Water Quality Administration, Department of the Interior, and the representative of Secretary Hickel.

The parties to this conference are the official State water pollution control agencies of Maryland, Virginia, and the District of Columbia, the Interstate Commission, and the U. S. Department of the Interior.

A progress meeting of the Potomac Enforcement Conference will be held in the near future. At that time we will expect to review the entire program for abatement in this area. Of course, at that time, in accordance with our usual practice, interested citizens, organizations, and governmental agencies will be invited to participate. The date and place for that meeting will be announced later.

We shall make copies of the summary and transcript available to the official State water pollution control

agencies. We have generally found, for the purpose of maintaining relationships within the States, that the people who wish summaries and transcripts should request them through their State agency rather than come directly to the Federal Government.

The reason for that is that when the conference has been concluded we would prefer people who are interested in the problem to follow their normal relationship in dealing with the State agencies rather than with the Federal Government. This has worked successfully in the past. We will be most happy to make this material available for distribution.

Again, I think, if you followed the descriptions of law and philosophy here on the relationships of the Federal Government, the States, and the localities, the primary responsibility resting with the States and the localities but giving the Federal Government very definite statutory responsibilities in pollution control, you will probably see an unfolding of that process, which is oftentimes a rather complicated one, sometimes amicable, today. Because I think we may be at the brink of the fruition of some long, hard work by many of the conferees.

At this point I would like to call on Mr. Freese for the presentation of the memorandum of understanding.

Paul Freese

Mr. Freese.

STATEMENT OF PAUL FREESE, CONFEREE

MR. FREESE: I have been asked to read the memorandum of understanding in its entirety. We have brought along sufficient copies for each of you to have a copy if you do not already have one.

MEMORANDUM OF UNDERSTANDING

ON

WASHINGTON METROPOLITAN REGIONAL

WATER POLLUTION CONTROL PLAN

The District of Columbia has determined that the requirement for a high quality effluent to comply with the water quality standards established pursuant to Public Law 89-234 (Federal Water Quality Act of 1965), and site limitations due to the objection of the Department of the Interior to the reclamation of submerged lands adjacent to the Blue Plains plant, imposes a limitation on capacity for treatment at that site of 309 million gallons per day. In addition, the limitation at Blue Plains is determined by flows in the Potomac River and their relationship to current levels of waste treatment technology. However, as construction of the additional and improved treatment facilities

proceeds, as further technological advances become known and available, and as experience is acquired in the enlarged plant it may be that additional capacity can be provided. Studies in that connection will be continued. The District of Columbia agrees, subject to the availability of funds, to develop the plant to the 309 mgd level now and make part of the capacity available to Maryland and Virginia jurisdictions now served by the facility in accordance with the following terms:

1. Work will proceed on the following schedule:

   A. Primary and sludge processing facilities:

      1. Preliminary plans completed 2/1/69
      2. Final plans completed
         (a) Primary 8/1/70
         (b) Sludge Processing 1/1/71
      3. Financing arranged 10/21/70
      4. Start construction 2/14/71
      5. Finish construction 5/19/73

   B. Secondary facilities, including equipment for chemical feed to the biological secondary process to achieve at least 90% BOD removal and about 90% phosphorus removal.

1. Preliminary plans completed 2/1/69
2. Final plans completed 7/1/71
3. Financing arranged 7/1/71
4. Start construction 10/11/71
5. Finish construction 11/1/74

C. Advanced waste treatment facilities capable of limiting BOD maximum loading to 12,700 lbs./day, phosphorus maximum loading to 560 lbs./day, and nitrogen maximum 6,130 lbs./day in the treatment plant effluent.

	BOD and P	N
1. Preliminary plans completed	Mar. 1972	Aug. 1974
2. Final plans completed	Mar. 1973	Aug. 1974
3. Financing arranged	Mar. 1973	Aug. 1974
4. Start construction	July 1973	Dec. 1974
5. Finish construction	July 1976	Dec. 1977

2. The allocation of the 309 mgd capacity of the Blue Plains treatment plant when completed is initially as follows:

District of Columbia	135 mgd
Potomac Interceptor	18 mgd
Washington Suburban Sanitary Commission	148 mgd

Paul Freese

Virginia (Pimmit Run Interceptor)	8 mgd
	309 mgd

It is recognized that the population projections of the Maryland National Capital Park and Planning Commission for the WSSC service area indicate a WSSC need for 175 mgd of capacity in 1980. Every effort will be made to provide for these flows, but in the event that this is not feasible, an initial capacity of 148 mgd, (in addition to Washington Suburban Sanitary Commission's share of the Potomac Interceptor flow) which is expected to be adequate until 1977, will be provided.

3. Capital costs for the Blue Plains treatment facility, after deducting Federal grants, will be shared by the District, WSSC, and Virginia (Pimmit Run only) in proportion to the initial allocations in the plant as set forth in paragraph 2 above.

4. Plans will proceed on the basis that Federal funds, in the maximum amount provided by applicable legislation (currently amounting to 55% of the estimated cost of each portion of the work described in paragraph 1 above), will be awarded upon certification by the District of Columbia that all local contributions determined in accordance with paragraph 3 above are committed and available on request. The intent of this provision is that the

District of Columbia will not finance the WSSC and Virginia (Pimmit Run only) shares. The Washington Suburban Sanitary Commission and Fairfax County (Pimmit Run only) will obligate their share of each project prior to the award of contracts. Funds will not be transferred, however, until required to make progress payments.

5. It is recognized by all parties that the proposed Blue Plains expansion will not be adequate to serve all future flows from the areas presently tributary to the Blue Plains facility and that all jurisdictions must plan immediately to provide adequate treatment for flows in excess of those that can be accepted in the Blue Plains regional treatment facility. Therefore, the appropriate parties will provide another regional plant or plants in which one or more of the parties may participate. The District shall be entitled to purchase capacity in such plant or plants on the same basis as provided for herein. Upon agreement of the parties involved at such time, the District's required capacity at the additional regional plant or plants may be provided by the payment therefor, and an exchange of such paid for capacity for such other party's capacity at Blue Plains.

6. The District of Columbia recognizes that to meet its ultimate requirements, it must provide treatment

for District of Columbia sewage in excess of the 135 mgd cited in paragraph 2 above, and at least 65 mgd* of Potomac Interceptor sewage. WSSC has retained consultants to advise it as to an overall sewerage plan including sewage treatment plant sites and capacities. This report is to be completed by February 1971, but in recognition of the extant problem and its projected needs, the WSSC has already formulated a projected schedule for site selection, design, and construction of an additional regional plant and will pursue its completion subject to the availability of funds and the operation of the applicable provisions of Maryland law. The District of Columbia and Virginia will be invited to participate in financing a portion of the cost of the additional regional plant in proportion to their allocated flow to the total plant capacity in the same manner as

*Based upon design projection as follows:

Jurisdiction	Equivalent Population	Average Daily Flow Plus Infiltration Allow.
Virginia - Fairfax Co.	176,250	22.05 mgd
- Loudoun Co.	143,100	17.93 mgd
- Dulles Intern. Airport	20,000	3.75 mgd
Maryland - WSSC	172,500	21.57 mgd
Total	511,850	65.30 mgd

provided in paragraph 3 above. Each participant will be entitled to use, upon completion of the construction and placing of the plant into service, that capacity allocated and paid for. The maintenance and operating costs as well as the cost of all pipelines, pumping stations, etc. shall be shared by all participants in the same manner as Blue Plains. Should the District of Columbia or Virginia undertake to construct additional regional sewage treatment facilities, the same conditions as described above will apply.

7. All parties will make an annual evaluation and five-year projection of sewage flows. In the event projected flows exceed the available capacity, the cooperating parties agree to plan and construct the facilities necessary to accommodate the anticipated flows.

8. The proposed schedule for the regional plant mentioned in paragraph 6 above follows:

Preliminary report completed	February 1971
Site selection	March 1971
Participants' capacities allocated	June 1971
Preliminary plans completed	June 1972
Site purchase completed	March 1973
Final plans completed	January 1974

Start construction	September 1974
Complete construction	June 1977

9. There are extant agreements between and among the parties hereto and others with respect to the transmission and treatment of sewage at D. C. facilities and payment therefor. Nothing herein contained shall in any way abrogate or modify such agreements.

10. The foregoing provisions of this Memorandum of Understanding reflect the parties' firm desire and intention to upgrade the Blue Plains Plant, establish another regional plant, and to take other measures directed toward early achievement of the water quality standards as established under the Federal Water Quality Act of 1965. Interim actions with respect to treatment and collection will be taken by the parties responsible to prevent further degradation of water quality during the upgrading and expansion of Blue Plains, enabling normal incremental increase in flows to be accommodated and system reinforcements to proceed. Commencing immediately, the following actions will be investigated, tested and then applied as ascertained to be advantageous to the goal.

1. Use of polyelectrolytes or other precipitating chemicals.
2. Installation of selected advanced processes

at an earlier date.

3. Use of micro-strainers.
4. Use of special polymer to increase flow capacity at flow bottlenecks.
5. Selected construction to diminish hydraulic bottlenecks.
6. Chlorination at pumping facilities and other up-sewer locations.
7. Oxygenation or other treatment in-sewer.
8. In-stream aeration.
9. Minimize peak discharges through use of storage facilities or by other means.
10. Use of additional treatment processes during critical flow season.
11. Use of separate small treatment plants on an interim basis.
12. Reduction of stormwater flows in sanitary sewers.
13. Control infiltration.
14. Diversion of sewage flows from Blue Plains to other treatment facilities.
15. Improve sewage collection facilities to prevent raw sewage overflows.

Such interim actions which are listed above are not exclusive

of any other measure which may also be found advantageous, nor is the list intended to reflect a sequential basis of test and application, but rather one or more actions may be undertaken concurrently. The costs of any such interim measure which is not part of or does not have permanent utility in the completed, upgraded plant construction or operation thereof, shall be paid for by the party or parties whose interim flow increase is accommodated thereby. The parties to this Memorandum of Understanding are District of Columbia, Washington Suburban Sanitary Commission and Fairfax County. Executed for the parties as follows:

District of Columbia

By: /S/ Norman E. Jackson Date: 9/23/70

Washington Suburban Sanitary Commission

By: /S/ Salvatore Barranca Date: 9/23/70

Fairfax County, Virginia

By: /S/ G. J. Kelley Date: 10/1/70

The United States Department of the Interior, District of Columbia and the States of Maryland and Virginia by their representatives have also participated in the discussions which preceded and led to the formulation of this Memorandum of Understanding, and they execute the same to indicate that fact.

Paul Freese

United States Department of the Interior

By: /S/ Fred J. Russell Date: 10/7/70
Under Secretary

District of Columbia

By: /S/ Malcolm C. Hope Date: 9/24/70

State of Maryland

By: /S/ Thomas D. McKewen Date: 9/24/70

State of Virginia

By: /S/ Noman M. Cole, Jr. Date: 10/7/70

Virginia's concurrence is subject to the reservations and clarifications in the letter from N. M. Cole to Norman Jackson dated October 7, 1970, which is attached.

COPY OF A LETTER FROM NOMAN M. COLE, JR. TO NORMAN E. JACKSON ON VIRGINIA STATE WATER CONTROL BOARD LETTERHEAD

Mr. Norman E. Jackson, Director
Department of Sanitary Engineering
Government of the District of Columbia
415 - 12th Street, N. W.
Washington, D. C.

Subject: Memorandum of Understanding on Washington Metropolitan Regional Water Pollution Control Plan

Paul Freese

Dear Mr. Jackson:

The State of Virginia signs the Memorandum of Understanding concerning the Blue Plains Treatment Plant subject to the following clarifications and reservations:

1. The construction effort described in the schedules given in paragraphs 1A and 1B of the subject memorandum should not result in a monthly discharge of BOD to the Potomac River from the Blue Plains Plant of more than shown on the attached curve. This curve was provided by Mr. Paul Freese of your office as a clarification of the plant performance which will have to be achieved during this portion of the construction effort.
2. With regard to the schedules (see paragraphs 1B and 1C) for installation and completion of secondary and advanced waste treatment (AWT) facilities for very high degrees of BOD and phosphorus removal, our signature does not mean we concur with such a schedule. In our opinion, it represents unnecessary delays in the start of construction and completion of facilities which are vital to clean up the algae problem in the Potomac. As presently proposed, construction of vital AWT facilities would not begin for another 3 years, and would not be completed for approximately 6 years. In this regard, we note that modifications of Virginia

treatment plants are proceeding on schedules which will complete such AWT facilities by 1973.

We have listened to the rationale for such delays at the Blue Plains Plant; and when we compared your proposal to what other technologies in this country are able to accomplish, we can only conclude that unimaginative approaches and inadequate funds have been used. In a country which can start and complete construction of large aircraft carriers, large transport aircraft, and missile projects in an ~ 4 year period and which has gone from the earth to the moon in 9 years, we see no reason why the advanced waste treatment facilities for very high degrees of BOD and phosphorus removal at the Blue Plains Plant should take 6 years.

In this regard, Virginia communities have, on a comparative economic basis, shouldered their responsibility for cleaning up the river of our Nation's Capital by the end of 1973 and we are disturbed to see that the District of Columbia has not seen fit to do likewise. Accordingly, we suggest that more imaginative and accelerated approaches be taken to accomplish the design and construction so that such facilities are completed no later than March 1974 (e. g., 3-1/2 years from now) and that the necessary funds be requested to

accomplish this goal.

3. We do not understand why Virginia treatment plants have to install AWT facilities to remove nitrogen by 1973 and the Blue Plains Plant not until the very end of 1977. This is of particular concern since (a) the technology of nitrogen removal developed to date is such that the performance and reliability of such removal systems have had limited success and are very dependent on such things as seasonal weather conditions, etc., and (b) data from the Tahoe Plant and Lake Washington indicate that very high degrees of BOD and phosphorus removals in their areas are sufficient to solve the algae problem. Accordingly, it would appear more reasonable if everyone had to remove nitrogen by the same date as Blue Plains and possibly by then the technology for its removal would be better defined from information generated by the FWQA research program and may even show that its removal is not essential.

4. The meaning of the second sentence of paragraph 10 is not clear and can be read several different ways. In discussions with Mr. Freese and Mr. W. L. Rogers of Interior, it is understood to mean the following:

   Normal incremental <u>increase in flow to plant shall only be allowed if</u> the interim actions

with respect to treatment and collection are such that there is no further degradation of water quality in the Potomac (i.e., no more than 100,000 lbs. of BOD per day as measured on a monthly average) between now and January 1, 1973. After that date, the BOD load to the river shall be as shown on the attached figure.

Subject to the above reservations and clarifications, Virginia concurs with the subject Memorandum of Understanding.

Sincerely yours,

/S/ Noman M. Cole, Jr.

Noman M. Cole, Jr.

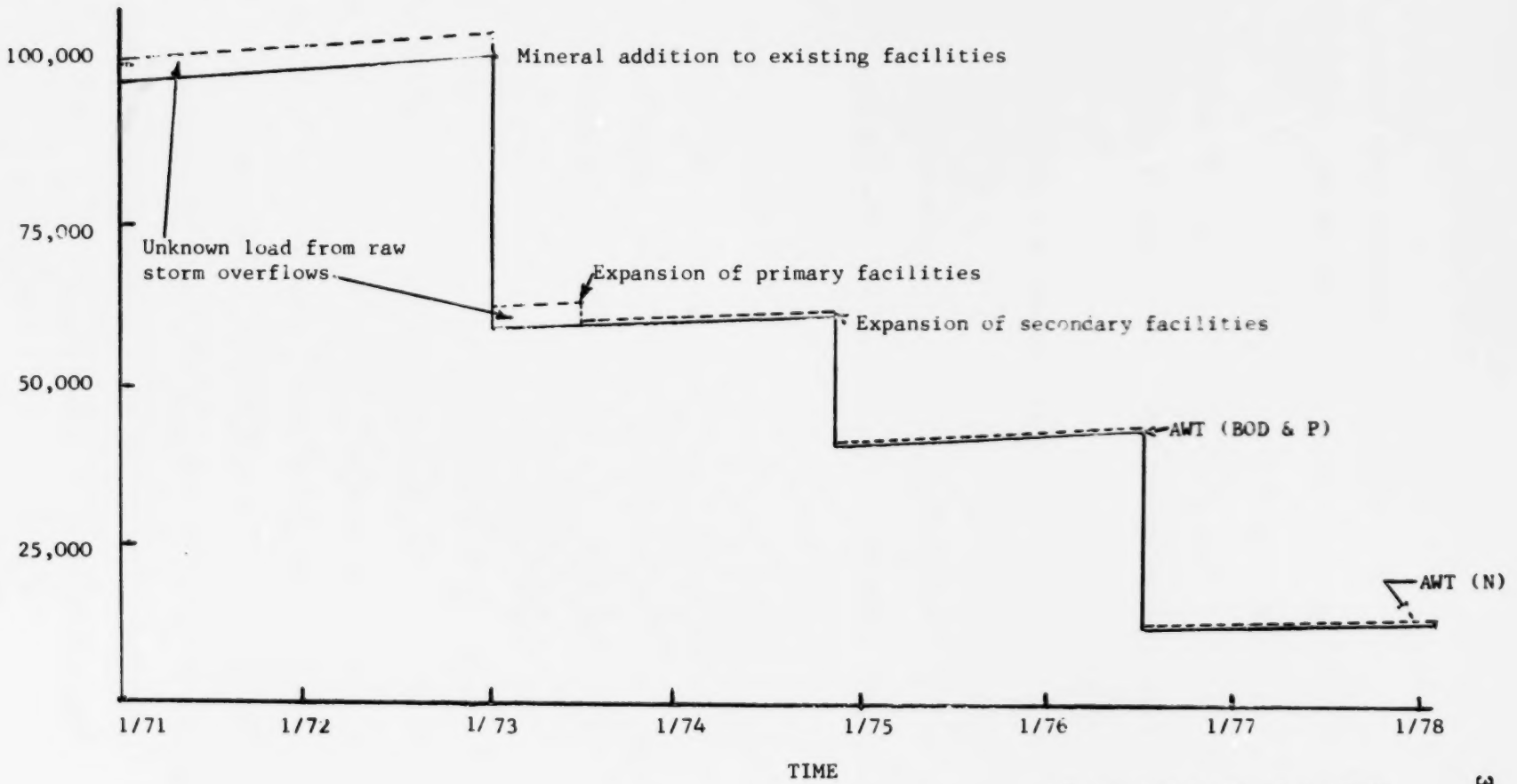
Chairman

Virginia State Water Control Board

- - -

MR. FREESE (continuing): The attachment to the letter follows:

PROJECTED BOD LOADING TO POTOMAC RIVER FROM BLUE PLAINS TREATMENT FACILITY



Presented to Virginia SWCB
at 10/2/70 by P. V. Freese

MR. FREESE: Mr. Chairman, our consultants, Metcalf & Eddy, are here to present the basis for our construction program of the plant.

Also, I believe Maryland is prepared to make some presentation on at least the concept of the second regional plant.

We can either present our consultant now or when you desire.

MR. STEIN: Why don't we just wait and see if the other signatories want to make a statement now before we go into that.

Fairfax County? Or the Washington Suburban Sanitary Commission?

MR. G. J. KELLEY (Deputy County Executive, Fairfax County): Mr. Chairman, representing Fairfax County, we find ourselves in complete agreement with the content and comment in Mr. Cole's letter, and we hope the enforcement conference will make the necessary adjustments.

My name is Kelley.

MR. STEIN: How about the Washington Suburban Sanitary Commission? Is there any comment?

MR. ROBERT J. McLEOD (General Manager and Chief Engineer, WSSC): My name is Robert McLeod. We have no comment to make at this time.

MR. STEIN: May we proceed, Mr. Freese, with your presentations?

MR. FREESE: I will ask Mr. Jack Bethel of Metcalf & Eddy to make a brief presentation at this time.

STATEMENT OF JOHN S. BETHEL, JR.
SENIOR VICE PRESIDENT, METCALF & EDDY,
BOSTON, MASSACHUSETTS

MR. BETHEL: Mr. Chairman, Mr. Secretary, Conferees, Gentlemen: The problem here obviously revolves around the problem of construction schedules. So that you might get a better feeling as to what the problems are and why this construction schedule is realistic, we have several graphic aids here to help along.

I am going to step down here, but I think I can speak loudly enough so that everyone can hear.

MR. STEIN: I think that microphone comes over.

MR. BETHEL: This is the Blue Plains site, which you will notice is bounded on the north by the Naval Research Laboratory, on the east by the Anacostia Freeway, and on the south and west by the river and Oxon Run.

(The diagram referred to follows:)

1
S
3

The present location of the existing facilities is this area in here (indicating).

This area shown as No. 1 and as S is the future primary facilities and the sludge processing facilities, respectively. Designs on both of these are now either complete or substantially complete.

This area in here in No. 2 is the secondary facilities. This will be the new activated sludge facilities which will operate in parallel with the existing facilities here.

This area in yellow, No. 3, --

MR. STEIN: Pardon me. May I interrupt just one moment? The record will not appear in color. It would be best if you referred to your numbers.

MR. BETHEL: All right, Mr. Chairman.

This area, No. 3, is the location for the advanced waste treatment facilities. You will notice in this area No. 3 the sludge windrows from the existing plant.

As the new sludge processing facilities come on the line and go into operation, there will be more sludge produced, obviously, at that particular point, because we will be getting sludge then from the primary facilities, and so forth, up here, which we are not getting now. We will also be improving the treatment here in the modified aeration

facility. So that the need for sludge disposal areas will increase.

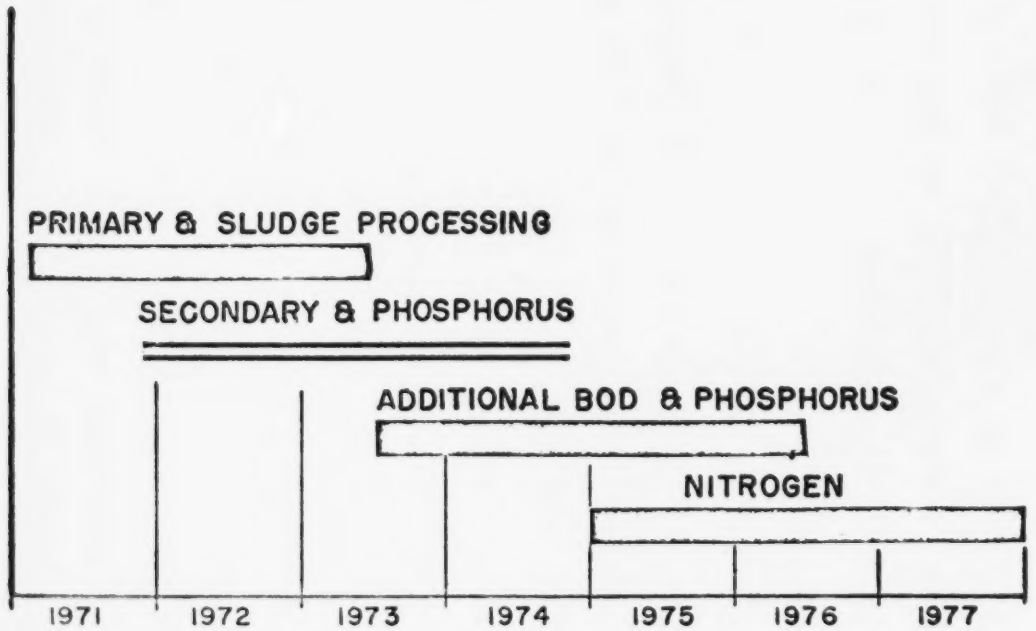
This becomes, obviously, then, a problem in how can we build advanced waste treatment facilities at the same time as we need the space to handle the sludge. These are all matters that have been considered as part of the schedule.

The whole point of this is that the plant is very unusually restrictive insofar as construction is concerned. We just have nowhere to go. The construction has to be scheduled on a realistic basis so that it can proceed and we do not have people standing on each other's shoulders.

Could I have No. 1, please?

(The vu-graph referred to follows:)

DISTRICT OF COLUMBIA
WATER POLLUTION CONTROL PLANT
BLUE PLAINS
PROPOSED CONSTRUCTION SCHEDULE



OCT. 1970

John Bethel

We have prepared a sheet here which shows the actual construction periods as proposed in the memorandum or as agreed to in the memorandum of understanding. You will note that in most of 1971 the primary and sludge processing facilities will be under construction. These will be constructed as two separate contracts, one contract for the primary facilities and one contract for the sludge processing facilities.

Starting in 1972 we start on construction of the secondary facilities and the chemical feeding facilities for this first removal of phosphorus, probably using alum or some salt such as that.

You will note in 1972, then, we have basically three contracts going -- the primary and sludge processing and the secondary and phosphorus facilities. This represents actually total construction contracts in the neighborhood of $100 million.

In 1973, when the primary and sludge processing facilities are completed, then the additional BOD and phosphorus facilities would start. The additional BOD and phosphorus facilities as visualized now are either a lime-soda process or a two-stage lime process for removal of phosphorus and a filter installation for removal of additional BOD.

John Bethel

At the end of 1974, when the secondary facilities are complete, we then start in on the nitrogen removal facilities. These will take approximately three years to build and the better part of a year and a half will be running concurrently with the additional BOD and phosphorus facilities.

May I have the second one, please?

(The vu-graph No. 2 referred to follows:)

DISTRICT OF COLUMBIA
WATER POLLUTION CONTROL PLANT
BLUE PLAINS

"FACTORS INCORPORATED IN DEVELOPMENT OF CONSTRUCTION SCHEDULE"

1. THREE SHIFT CONSTRUCTION FORCE

2. IMPROVEMENT OF RESTRICTED SITE ACCESS

3. OPERATING WITHIN EXTREMELY LIMITED SITE AREA

4. MAINTAINING CONTINUNITY OF SLUDGE DISPOSAL

5. MAINTAINING CONTINUNITY OF WASTE WATER TREATMENT

John Bethel

A number of things were considered in developing the construction schedule:

First of all, all of the construction schedule is predicated upon a 3-shift construction force -- in other words, 3 working around the clock 5 days a week.

It also involves improvement of the site access. The one road into the site comes in off the Anacostia Freeway. I don't think I mentioned that that road also serves the Naval Research facilities. With this amount of construction, there is going to have to be something done.

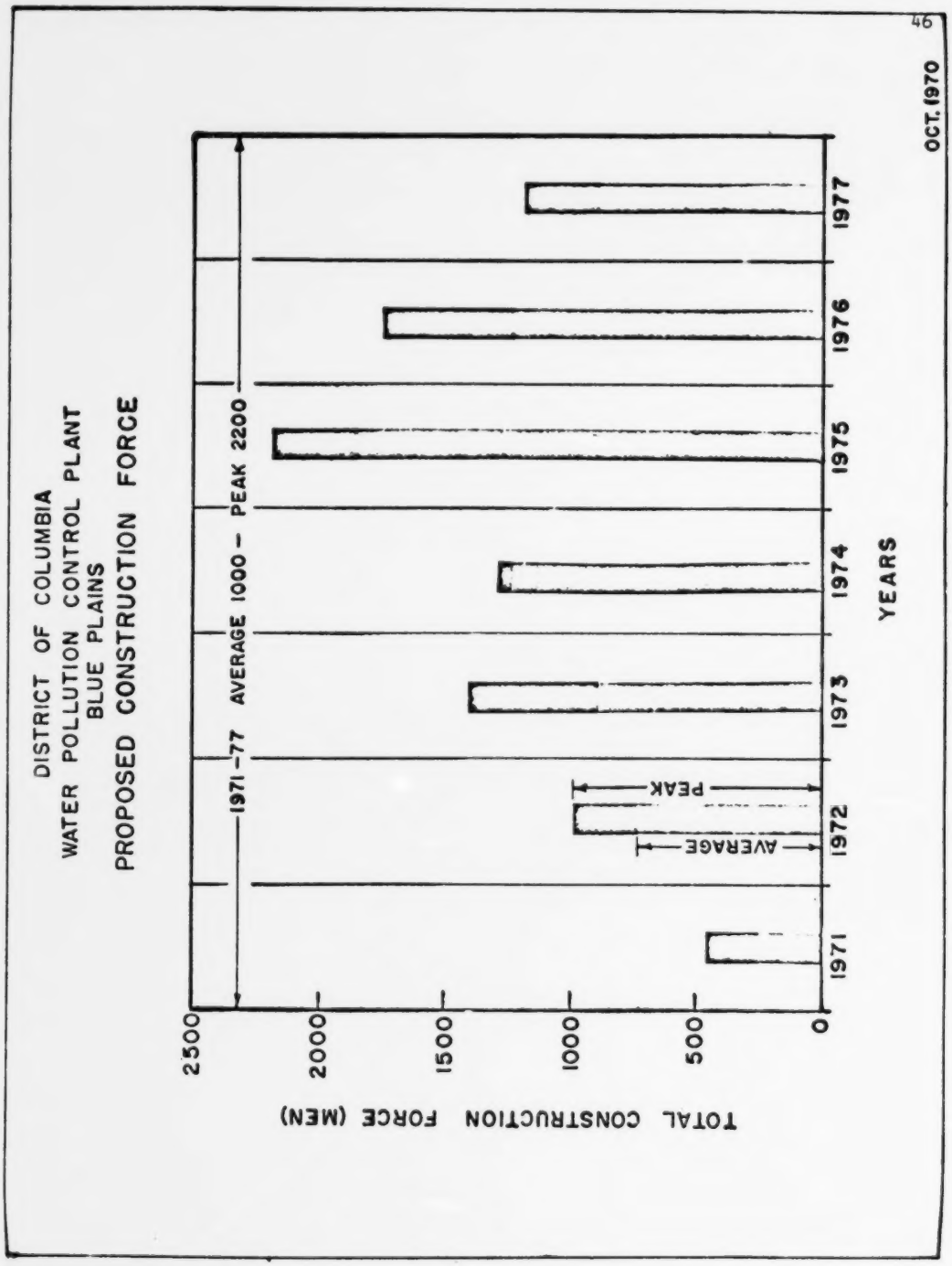
Third is operating within the extremely limited site area which I pointed out.

Fourth, maintaining continuity of sludge disposal.

And, fifth, maintaining continuity of wastewater treatment.

Could I skip over to No. 3?

(The vu-graph No. 3 referred to follows:)


46
DISTRICT OF COLUMBIA
WATER POLLUTION CONTROL PLANT
BLUE PLAINS
PROPOSED CONSTRUCTION FORCE
1971-77 AVERAGE 1000 - PEAK 2200
TOTAL CONSTRUCTION FORCE (MEN)
2500
2000
1500
1000
500
0
PEAK
AVERAGE
1971
1972
1973
1974
1975
1976
1977
YEARS
OCT. 1970

This is the proposed construction force or the construction force that would be required to meet the proposed construction schedule. You will note here that in the first year, in 1971, the construction force is minimal. It requires something in the order of 260 people, with a peak of 410, operating on the site. This is during the period, basically, of building the primary tanks and starting in on the sludge disposal facilities.

As we get into the project, we then go up to average figures in 1972 of 740.

In 1973, the average work force is 890.

In 1974, the work force is 1,240.

In 1975, the average work force is 1,860.

Then we start dropping off. In 1976, the work force is 1,230.

In 1977, the work force is 900.

This gives us an average work force actually over the whole length of the job of about 1,000 men working per day five days a week.

We hit the peaks obviously here. There are peaks in here (indicating). The highest peak we have is in 1975 where we have actually about 2,200 people working on the site at that particular moment.

Could I go back now to the other one (referring

to vu-graph No. 2)?

I mentioned on the improvement of the restricted site access, the second item here, that we will need some improvement to get into that site. If we are going to have as many as 2,200 people at a peak working on that site, we can't be using one access off the Anacostia Freeway. Also, we will be sharing that with the Naval Research people.

This would mean that consideration might well be given to construction of a second access from the Anacostia Freeway.

An alternative to that would be, at least insofar as bringing materials to the site is concerned, the construction of a marine terminal at the site for handling the materials.

In any case, we have one rail line coming in there, but the one rail line comes directly through the Naval Research center, so that we are going to be bringing in large amounts of materials and the marine terminal might be a necessity. This might also solve the problem.

This whole thing is under study right now as to just what the best method is.

Of course, there is another thing. While all this construction is going on, the District of Columbia is going to have people operating the existing plant, and we have got

to get the whole work force in and out of the plant, plus all their chemicals, plus their sludge, and so forth and so on, handling the sludge.

No. 3 is the problem of working within this extremely limited site area. The total site is about 150 acres. The present facilities there -- the present plant -- occupy about 75 acres, leaving about an equal number of 75 acres for the new primary facilities, the secondary facilities, the sludge processing facilities, and the advanced waste treatment facilities.

The new primary, sludge processing, and secondary facilities will occupy something in the order of 35 to 40 acres, so that we are going to have to build the whole advanced waste treatment facilities within that same 35 to 40 acres.

Could I show those two slides? These are slides of a plant being built at Hartford, Connecticut right now.

(Slide)

This is a smaller plant, but it is still a 60 mgd plant. It was built on 60 acres. This is primary and secondary and sludge processing.

We are talking now about building essentially the new portion of a plant which will be 180 mgd which coupled with the old plant will give the 309 mgd. We are talking

building this 180 mgd plant on something of the order of 35 to 40 acres.

Here (indicating slide) we have something like about 1 million gallons an acre. It looks as though then in the District of Columbia we are going to have to build it within about two-tenths of an acre -- per million gallons. In other words, it will be within about one-fifth the space.

Could I have the next slide, please?

(Slide)

This is a section of the Hartford plant. The reason I put it on is to indicate that even on this much larger site available there is a tremendous problem on automobiles of the workers, which you can see down here in the lower lefthand corner, which are taking up a good portion of that area.

You will see in various portions of the slide supplies stored, materials stored. All of these things have to be stored.

This is a reason that we can't go ahead and suddenly build a tremendous facility on a limited site which is going to be taken up eventually by almost entirely tanks.

The future nitrogen facilities, for instance, or the phosphorus and nitrogen and BOD facilities, for

50a

instance, will have to be built on this 35 to 40 acres, and this is going to be a facility that is going to handle 309 mgd. As I said, this one here (indicating slide) is only handling 60 mgd on 60 acres.

At the end of the project at the District, that Blue Plains plant is going to be essentially wall-to-wall tanks and wall-to-wall buildings. We just can't suddenly construct all of this stuff at one time.

Can I go back to the other machine?

(Vu-graph No. 2)

Point No. 4 was maintaining continuity of sludge disposal. This is not a major item, but it is an item. As the new facilities at the District plant are brought on the line, it is going to require more area to get rid of the sludge, or other means are going to have to be developed to get rid of the sludge.

We also have the problem, of course, with grit, etc. So that this has to all be woven into the problem.

It means it is a site that is not immediately available. We have to keep the plant running. We have to keep the sludge disposal facilities running.

Finally, maintaining the continuity of the wastewater treatment, I think, probably goes without saying. During the time that all this construction is going on, we

are going to have to maintain the treatment plant in operation. This means essentially that the primary and secondary facilities, as an example, the new ones, must be in operation before we can cut in the additional air blowers and do some work out in the existing tanks to bring the whole plant up to the 90 percent treatment.

I think, in summary, what we have tried to say this morning here is that this is not a simple matter. It is a construction schedule that is dictated basically by the amount of work on the extremely limited site. Because of that fact, construction is going to have to be scheduled at various times. We have to provide room for movement of men and materials over the site.

Thank you, Mr. Chairman.

MR. STEIN: Thank you.

Does that conclude the District's presentation?

MR. FREESE: That concludes our presentation.

MR. STEIN: Are there any comments on this from the conferees?

(No response)

Does Maryland have a presentation?

MR. McKEWEN: The presentation is actually that of the Washington Suburban Sanitary Commission. Dr. Machis will make the presentation.

Alfred Machis

STATEMENT OF

ALFRED MACHIS, DEPUTY CHIEF ENGINEER,

WASHINGTON SUBURBAN SANITARY COMMISSION

DR. MACHIS: The information given in the memorandum of understanding states that the Sanitary Commission's need for 1980 will be 175 mgd. The initial allocation in Blue Plains is 135 mgd. This makes it immediately obvious that Maryland must move ahead and move ahead rapidly to provide for the additional capacity that it will need.

We also know, of course, that the District of Columbia's and Virginia's capacities will not be totally handled in Blue Plains and that additional capacity will be needed for them.

The Sanitary Commission in July of this year engaged consultants, Dr. Abel Wolman and Whitman, Requardt & Associates, acting jointly, to prepare for it a study which will lead to the selection of alternate projects for accommodating the future projected flows from our area and also, of course, from the other areas that may need service.

Their study will include cost estimates of these alternates and the development of a schedule of site acquisition and construction of facilities in the detailed

stages necessary.

We expect from our consultants a preliminary report in November of 1970 and a final report in February of 1971. From that, we will then move into the schedule which is enumerated under paragraph 8 of the memorandum of understanding, which will lead to the site selection, the preparation of the preliminary engineering plans, the purchase of the site, and the ultimate construction.

This schedule appears to us to be the most reasonable that we could conceive. However, I would like to point out that if it developed that we could advance the site acquisition, then, obviously, we can advance the construction, and I think the Sanitary Commission would move accordingly.

MR. STEIN: Thank you.

Are there any comments from the conferees?

(No response)

As far as I can see it, the memorandum of understanding and the proposals we have meet the requirements and the time schedule adopted by the conferees at their conference except for some interim dates. If I am wrong on that, I would like to know it.

I do think that the conferees, when we go into executive session, have to bear that in mind and determine

whether these adjustments in interim dates are the kind of thing we find to be acceptable. We should give some attention to whether there is some device to speed up the work, if that is at all possible, or check on that for a speedup.

MR. PAESSLER: Mr. Chairman, --

MR. STEIN: Yes?

MR. PAESSLER: -- could I return and ask Mr. Bethel one or two questions?

MR. STEIN: Surely.

MR. PAESSLER: Considering the problem of space on the site, both from the standpoint of the facilities that will be constructed occupying the greater area and from the standpoint that there is not a large amount of extra space available, is there any possibility of offsite storage of equipment and construction materials that would appear feasible?

MR. BETHEL: I don't know that I can give you a direct answer to that, Al. There is nothing within the immediate area that I know of that could be utilized. Perhaps Mr. Freese or somebody could comment better on that particular point.

I am certain, even with the schedule that we have as I tried to show it, that the amount of storage space that is required, the problem of cars of workers, etc., in

the site, and the fact that we are building this plant on an extremely restricted site, which is roughly one-fifth of the site that we had at Hartford per million gallons, will indicate that there is going to have to be a lot of offsite storage.

Where precisely it is going to be I don't know.

But I don't believe you can say that you could reduce the construction schedule or something by this type or thing or compress it by offsite storage.

MR. PAESSLER: What is contemplated to be the final method of sludge disposal?

MR. BETHEL: The final method of sludge disposal is incinerators. At the moment it is now trucked to the site at Lorton -- that is, the incinerated ash.

MR. PAESSLER: When will the incinerator be completed?

MR. BETHEL: Let me make sure of that one. The incinerator is completed by 1973. It is supposed to finish construction in May.

MR. PAESSLER: But essentially at the same time the primary improvements will be --

MR. BETHEL: That is correct. The two contracts will be let approximately simultaneously.

MR. PAESSLER: That will then take care of the sludge disposal problem for the balance of the construction

work?

MR. BETHEL: That is correct. We still have to move the old sludge out of there, but we are not putting any new sludge in there at that particular time, because that whole site, as you remember, has pretty well filled up with the existing sludge windrows.

MR. PAESSLER: Right. Thank you.

MR. STEIN: Mr. Bethel, you mentioned the possibility of access through a marina. This just might have a dual advantage -- to not only provide accessibility but also to provide a means of storage of material on barges in the river.

MR. BETHEL: Yes, this is very true, Mr. Chairman. I think we were just discussing this morning one of the possibilities. The concrete plant is over there. We can handle our aggregate at dockside and reduce a lot of the traffic in and out.

I think this is one advantage. You are quite correct.

MR. STEIN: Are there any comments or questions?

(No response)

If not, we will ask whether anyone in the audience has a question. I will have to ask you though to come up and use a microphone if you are going to have a question.

Are there any questions from the audience?

(No response)

If not, I really think this is remarkable agreement, however the conferees approach this. I think once again it indicates a real achievement. Under our system of government, we have some of the most complicated technical and political conditions, and political conditions are given to us by subdivisions of government that we inherited historically. I think, as many of you know, any public works project in the Washington metropolitan area, particularly one involving more than one jurisdiction, involves all sorts of difficulties which don't seem to obtain with quite that force in other areas of the country.

I think it is really an achievement that an agreement like this has been worked out.

I know for the Federal program, some of the professionals who have been working on the Federal level, and I think I am speaking also for the State and interstate conferees, we all owe a real vote of thanks to Mr. William Rogers, the Deputy Under Secretary of the Department of the Interior, who has been sitting on my left.

He really moved this agreement through and followed it and "bird-dogged" it all along the way. I would think it is fair to say that without him and his efforts and the efforts of the Under Secretary's office,

we probably would not have this today.

So I really want to thank you, Bill, for helping our program and helping the water pollution control program immensely.

Yes?

MR. DAVID SOBERS (Environmental Planner, Maryland National Capital Park and Planning Commission, Silver Spring, Maryland): I have a question.

MR. STEIN: Will you come up to the podium? Please identify yourself.

MR. SOBERS: I am David Sobers, environmental planner with the Maryland National Capital Park and Planning Commission in Silver Spring. I would like to reiterate a question that was raised in the Virginia letter signed by Mr. Cole and direct this to the conferees requesting a clarification.

Based on paragraph 4 in Mr. Cole's letter, I would like to know whether or not increased flows will be permitted from the Maryland jurisdictions prior to the completion of the secondary facilities.

MR. STEIN: Who feels he wants to try to answer that?

Mr. Freese.

MR. FREESE: I guess I have been exposed to as many questions on this as anyone else has.

It is my understanding, if my understanding is correct, additional flows will be permitted during the construction and expansion of the plant on this condition: that no additional BOD load to the river at any time would result.

The purpose in the memorandum of discussing interim measures was exactly this: that either by pre-treatment of the sewage or some other method as has been discussed here, although the gallons of flow to the river might increase, the actual pounds of pollutant would not.

MR. SOBERS: When this point was raised at an earlier Potomac River enforcement conference, comment was made by the Federal officials that there might be some negation of the point that Mr. Freese has just made. I would like to ask whether, from the Federal officials, Mr. Blaisdell, for example, could comment on whether or not Federal funding would be available to support Mr. Freese's statement.

MR. BLAISDELL: Well, I don't know if the latter part of your question is quite clear to me. Do you want to repeat that?

MR. SOBERS: Well, there was some comment made at an earlier conference that Federal funding would not be forthcoming until secondary facilities were completed and

definite plans were made for tertiary facilities. I was wondering whether or not the Federal authorities are in agreement with Mr. Freese's statement that between now and 1974, provided there was no additional BOD loading on the river, additional flows in terms of gallonage could be accepted at the Blue Plains plant.

MR. BLAISDELL: Well, I would answer that by saying that this memorandum of understanding is, in effect, a change in that policy that you refer to and that under the conditions described by Mr. Freese additional flows would be allowed to the plant. And, of course, it is planned that Federal participation will be made in the upgrading and expansion of the plant.

Does that answer the question?

MR. SOBERS: It certainly does. Thank you.

MR. STEIN: Are there further questions or comments?

(No response)

Before we recess, let me make one personal comment that I have made many times before. I don't know how personal this is, but I have said this many times before on the Potomac.

It seems to me from much of the testimony and the statements we have had at the conference -- and your eyes and your nose can tell you this -- we have a pretty

acute pollution problem in the Potomac in the Washington metropolitan area.

It also seems to me from dealing with pollution problems throughout the country that we are dealing with the ordinary "garden variety" of pollution from municipal sources. In large measure that is amenable to no methods of treatment.

It also seems, unless I am mistaken, that the sooner we get moving on the project and the faster we put in primary treatment and the faster we put in secondary treatment, the faster you are going to see an improvement in that river.

Now, I think all hands seem to be agreed here we need advanced waste treatment. But that river is in such condition now that just providing really sufficient primary and secondary treatment should result in a marked improvement. The advanced waste treatment is kind of to really protect that river and bring it up to the standards which the jurisdictions here and the Department of the Interior have accepted.

Again, I have raised this question with the conferees all the time. I think this is a question that the people here have to face: Are we going to get agreement -- you can see how complicated this is -- on an absolutely perfected system which is going to really dot

every "i" or cross every "t"? Or are we really going to get started on getting the gross pollution out of the river?

I think for a long time we have been held up and we have not gotten that gross pollution out of the river.

Are there any other comments or questions?

MR. JOHNSON: Mr. Chairman, --

MR. STEIN: Yes?

MR. JOHNSON: -- going back to paragraph 4 in Mr. Cole's letter, I believe a couple of weeks ago we agreed there would be a committee to consider such proposals and make recommendations to the conferees. Does this need to be done formally this morning?

MR. STEIN: We are going to consider that. I would hope the conferees would consider that in the executive session. This is one of the things I am going to bring up.

I think we have two questions here, two large questions: one, whether this agreement is acceptable; two, whether there can be any devices or proposals recommended by the conferees which would explore the speeding up of the schedule. You can bring up any other questions.

These are really two major questions that I see before us today. I think we have to answer the first one first before we can get to the second. But I would hope that the conferees would address themselves to that in the

executive session.

Are there any other comments or questions from the floor?

(No response)

If there are not, we are going to recess and go into executive session. Let me check with the conferees here. I suspect we may well have an announcement by about noon. If we don't -- I have been with these conferees before and I think I can make a judgment on how long it is going to take -- but if we don't we will let you know whether we are running behind schedule.

Let's see if we can do it. We will stand recessed. We will have an announcement afterward, and then the conferees will be available for questions from the press.

We stand in recess.

(Whereupon, at 10:40 a.m., a recess was taken until 12: 50 p.m.)

* * *

CONCLUSIONS OF THE CONFERENCE

MR. STEIN: We stand reconvened.

Again, I never fail to be amazed at the democratic processes of our institutions here. Because after our usual hour or so of charm, we have come to a unanimous

agreement among the conferees. I think this is a wonderful thing we can say about our system. Because despite different views, different philosophies, when we get to work on a specific problem we can come up with agreements and solutions. And the funny thing about this process is that it works.

The conferees unanimously came to the following agreements:

1. The "Memorandum of Understanding on Washington Metropolitan Regional Water Pollution Control Plan" as presented to the Potomac River-Washington Metropolitan Area Enforcement Conference on October 13, 1970, is accepted by the conferees. The conferees recommend the Secretary of the Interior approve this memorandum of understanding.

2. At the next progress meeting the conferees will consider the coordination of time schedules for nitrogen removal facilities.

3. The conferees intend to meet at least four times a year to review progress against overall project schedules and also to review proposed actions to accommodate interim increased flows. There will be a continuing examination at these meetings of the time schedules enunciated in the memorandum of understanding with a view

to possible acceleration.

That concludes the findings and recommendations and conclusions of the conference.

Are there any statements from the conferees or comments from them?

(No response)

At the conclusion of the conference, as I indicated, the conferees will be available for questions from the press and others.

With that, I would like to thank you all for coming. Thank you all for participating. I want to single out Mr. William Rogers again for doing a tremendous job in bringing all the parties together, recognizing the independence of thought, the firmly held convictions of the conferees, and the very, very difficult problems that you had to deal with.

I think you all should be congratulated on being flexible enough to come to an agreement like this which I think is going to really be the "Magna Carta" for the cleanup of the Potomac. Now we can truly get started.

With that, we are adjourned.

(Whereupon, at 12:58 p.m., the special session of the conference was adjourned.)

* * *

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